ABSTRACT OF THE DISCLOSURE

The grayscale levels of red, green and blue display data are detected in each sub-frame, and the intensity of incident light on a liquid crystal panel and the transmittance of the liquid crystal panel are adjusted based on the detection result. The transmittance of the liquid crystal panel is adjusted to have maximum transmittance for display data that requires a maximum amount of transmitted light in each of red, green and blue sub-frames, and the intensity of incident light is reduced according to the adjustment result of the transmittance. By reducing the amount of incident light on the display element to the minimum required amount, the power consumed by a back-light is reduced as much as possible while maintaining the display images of the respective colors according to the grayscale levels.